

Amendments to the Claims

Claims 1-27: Canceled.

28. (Currently amended) A kit **for determining RNA-dependent DNA polymerase activity** comprising:

- an RNA template;
- a DNA primer complementary to a region of the RNA template and of length sufficient to form a stable template-primer hybrid molecule with the RNA template; and
- a deoxynucleoside triphosphate labeled with an acridinium **ester** moiety;

wherein neither the RNA template nor the DNA primer contains a **luminescent detectable moiety and a solid phase for capturing a complex comprising the RNA template, DNA primer and the deoxynucleoside triphosphate labeled with acridinium ester moiety incorporated into the DNA primer by the polymerase.**

29. (Original) The kit of claim 28 further comprising buffers for conducting a reverse transcriptase assay.

30. (Original) The kit of claim 29 wherein the buffers comprise a divalent metal ion at a concentration of about 5 mM.

Claims 31-39: Canceled.

40. (Previously presented) The kit of claim 28, wherein said kit further comprises one or more deoxynucleoside triphosphates not labeled with an acridinium moiety.

41. (Currently amended) The kit of claim 40, wherein the RNA template, DNA primer, deoxynucleoside triphosphate labeled with an acridinium moiety, or deoxynucleoside triphosphates not labeled with an acridinium **ester** moiety further comprise a capture moiety **which can be captured by the solid phase.**

42. (Previously presented) The kit of claim 41, wherein the capture moiety is a hapten.

Claim 43: Canceled.

44. (Previously presented) The kit of claim 28, wherein said kit further comprises a dilute acid, hydrogen peroxide, or both.

45. (Previously presented) The kit of claim 28, wherein said RNA template comprises homopolymeric RNA, heteropolymeric RNA, or both.

46. (Currently amended) The kit of claim 28, wherein the deoxynucleoside triphosphate labeled with an acridinium ester moiety has the formula:

TP-Sugar-Px-L-Acr

wherein:

TP is a triphosphate group attached to the 5' position of the sugar;

sugar is a pentose sugar moiety;

Px is a purine, pyrimidine, or 7-deazapurine, and wherein Px is attached to the 1' position of the sugar moiety through the N1 position of Px when Px is a pyrimidine or through the N9 position of Px when Px is a purine or a 7-deazapurine;

L is a linker comprising linear or branched hydrocarbylene or heterocarbylene of at least one carbon atom, wherein L is covalently attached to Acr at one end of L, and at another end to Px through position C5 or C6 of Px when Px is a pyrimidine, or through position C8 of Px when Px is a purine, or through position C7 or C8 of Px when Px is a 7-deazapurine; and

Acr is an acridinium ester moiety.

47. (Previously presented) The kit of claim 46, wherein L is linear hydrocarbylene or heterocarbylene comprising at least one carbon atom.

48. (Previously presented) The kit of claim 46, wherein L is linear alkenylene or heteroalkenylene comprising at least 3 carbon atoms.

49. (Previously presented) The kit of claim 46, wherein L is selected from the group consisting of $-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-$, $-\text{CH}=\text{CH}-\text{CH}_2-\text{NH}-$, $-\text{NH}(\text{CH}_2)_6\text{NH}-$, $-\text{C}\equiv\text{C}-\text{CH}_2\text{NH}-$, and $-\text{CH}_2-\text{C}\equiv\text{C}-\text{CH}_2-$.

50. (Currently amended) The kit of claim 28, wherein the acridinium ester moiety is selected from the group consisting of 4-(2-succinimidyl-oxycarbonylethyl)-phenyl-10-acridinium-9-carboxylate trifluoromethyl sulfonate, 1-methyl-acridinium ester, and 1-methyl-di-meta-fluoro-acridinium ester.

51. (Previously presented) The kit of claim 46, wherein Acr is selected from the group consisting of 4-(2-succinimidyl-oxycarbonylethyl)-phenyl-10-acridinium-9-carboxylate trifluoromethyl sulfonate, 1-methyl-acridinium ester, and 1-methyl-di-meta-fluoro-acridinium ester.

Claims 52-68: Canceled.

69. (New) The kit of claim 28, wherein the DNA primer is chemically linked to the 5' end of the RNA template.

70. (New) The kit of claim 28, wherein the DNA primer comprises a capture moiety which can be captured by the solid phase

71. (New) The kit of claim 28, wherein the template comprises a capture moiety which can be captured by the solid phase